



September 30, 2005

Mr. Steve Munro  
Compliance Project Manager  
California Energy Commission  
1516 9th Street, MS 2000  
Sacramento, CA 95814-5512

**Subject: Petition for Revisions/Administrative Changes to Soil & Water - 4  
Commission Decision (97-AFC-1C)  
High Desert Power Project, LLC**

Dear Mr. Munro:

High Desert Power Project, LLC ("HDPP") is submitting this petition for revisions to Soil & Water-4 of the Commission Decision (97-AFC-1C) for the High Desert Power Project located in Victorville, California. As detailed in the attachment, HDPP is requesting an extension until the end of the 12<sup>th</sup> year of commercial operation to meet the current ground water injection requirement (13,000 AF) based on the following assumptions:

- current annual average treatment levels for Total Dissolved Solids (TDS) and Trihalomethanes (THM);
- injection rate of 1,450 AF/yr; and
- 2.5 % water dissipation.

Below are the specific revisions to Soil & Water – 4 with new text shown underlined and deleted text is shown as ~~strikethrough~~.

*Soil&Water-4. Injection Schedule:*

- a. *The project owner shall inject one thousand (1000) acre-feet of SWP water within twelve (12) months of the commencement of the project's commercial operation.*
- b. *By the end of the ~~5th~~ 12th year of commercial operation, the amount of water injected minus the amount of banked groundwater used for project operation, minus the amount of dissipated groundwater shall meet or exceed thirteen thousand (13,000) acre-feet.*

- c. *After the ~~11th~~ 12th year of commercial operation and until three (3) years prior to project closure, the project owner shall replace banked groundwater used for project operation as soon as SWP water is available for sale by MWA. The project owner may choose to delay replacement of a limited quantity of banked groundwater used ~~for~~ for project operations during aqueduct outages until the cumulative amount of groundwater withdrawn from the bank reaches one thousand (1,000) acre-feet. Once the limit of one thousand (1,000) acre-feet has been reached, the project owner shall replace banked groundwater used for project operation during aqueduct outages as soon as SWP water is available for sale by MWA.*

*See the verification to Condition 5.*

The aquifer banking system (ABS) is the only backup source of water for HDPP and to minimize the possibility of leaving the project without a reliable backup source of water, HDPP is exploring other alternatives. The attachment includes a brief description of each alternative, estimate of additional years required to meet the water injection requirements and basis for the estimates. In coordination with the CEC and other regulatory agencies, HDPP will continue working on the necessary approvals and revisions to expedite banking and compliance with the injection requirements.

This petition to amend the Commission Decision approving the project contains the information that is required pursuant to 20 CCR Section 1769, Post Certification Amendments and Changes, of the California Energy Commission's Siting Regulations.

As demonstrated in this petition, the proposed revisions

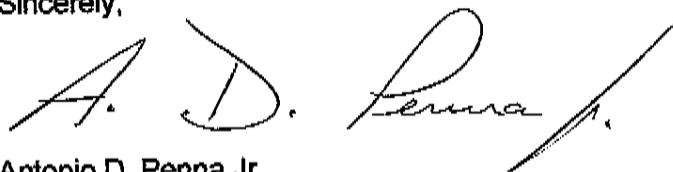
- will not result in an adverse impact to the groundwater quality;
- will allow HDPP more flexibility to (i) continue minimizing aquifer impact during periods of elevated TDS and total THM levels, and (ii) meet the current ground water injection requirement of 13,000 acre-feet.
- do not affect compliance with applicable laws, ordinances, regulations, or standards (LORS).

Accordingly, HDPP requests the Energy Commission Staff to expedite review of this petition, and request Commission approval of the proposed revisions in accordance with Title 20 CCR §1769(a)(3).

In an effort to expedite the revisions, we will contact you next week to make arrangements for a phone conference to review and answer any questions you may have on our proposed revisions.

In the meantime, should you have any questions or need additional information regarding this submittal, please contact me at (760) 530-2312 or Ramiro Garcia at (949) 425-4755.

Sincerely,

A handwritten signature in black ink, appearing to read "A. D. Penna Jr.", with a long, sweeping flourish extending to the right.

Antonio D. Penna Jr.  
Plant Engineer / Environmental Manager  
High Desert Power Project, LLC

cc: Mr. Greg Cash  
RWQCB – Lahontan Region  
14440 Civic Drive, Suite 200  
Victorville, CA 92392-2306.

Steve Shulder, Constellation Energy

Ramiro Garcia, Constellation Energy

Facility File: 2.1.11 (ABS Correspondence)

**ATTACHMENT**

**PROPOSED REVISION TO SOIL&WATER-4**

**Extension of Current Five Year Injection Requirement**

The current five-year injection schedule does not allow HDPP enough flexibility to take the necessary actions often required to minimize injection during periods of elevated total dissolved solids (TDS) and trihalomethanes (THM). Extending the injection schedule will allow HDPP the necessary flexibility to (i) operate the ABS in an efficient manner to minimize aquifer impact and (ii) meet the current ground water injection requirement of 13,000 acre-feet.

The ability to inject water has been greatly limited by higher than estimated TDS in the incoming State Water Project (SWP) water relative to the current TDS annual average treatment level in the Conditional Waiver. The current TDS annual average treatment level was based on data from Check 41 from 1997 through 2001. As a result of high TDS levels, HDPP discontinued injecting water several times. In addition, due to the high levels of total THM, the operation of the aquifer banking system (ABS) is currently limited to approximately three (3) months during the summer, resulting in the injection of approximately 725 acre-feet per year. However, HDPP believes that through more effective management of the chloramination process, THM formation can be reduced which should allow injection for up six months each year. The results of the August samples were below the THM detection limit of 0.5 ug/L. Based on six months of operation, HDPP should be able to inject approximately 1,450 AF/yr, assuming that the ABS can operate 85% of the time at the design flow.

As of August 31, 2005, HDPP has injected approximately 2,250 acre-feet. Below are the estimated additional years necessary to meet the water injection requirements based on current treatment levels, operating conditions, specified dissipation rates and the following assumptions:

- HDPP can bank water for six months from late spring to early fall when TDS is typically low;
- HDPP can meet the THM annual average;
- the ABS operates 85% of the time at the design flow.

<b>Scenarios / Dissipation Rate</b>	<b>Additional Years Required (From August of 2005)</b>
A) Current water injection requirements (13,000 AF) and treatment levels, injection rate of 1,450 AF/yr and <u>5% water dissipation rate</u>	10 years

B) Current water injection requirements (13,000 AF) and treatment levels, injection rate of 1,450 AF/yr and <u>2.5% water dissipation rate</u>	9 years
C) Current water injection requirements (13,000 AF) and treatment levels, injection rate of 1,450 AF/yr and <u>1% water dissipation rate</u>	8 years

Due to the low water dissipation rate thru the end of 2004 (Approximately 0.5 %), HDPP believes that a 2.5 % dissipation rate may be more representative of the average dissipation rate for this project. Based on this, as indicated on the above Table, approximately nine (9) additional years (from August of 2005) will be required to inject 13,000 acre-feet of water. Accordingly, HDPP is requesting an extension until the end of the 12<sup>th</sup> year of commercial operation (April, 2015) to meet the current water injection requirement of 13,000 acre-feet.

Since there is no modification to the quality of water being injected, the proposed condition change should be processed as an administrative certification revision. The change will not result in an adverse impact to the groundwater quality and will be more protective of the aquifer by allowing HDPP more flexibility to take the necessary actions to minimize injection during periods of high levels of TDS and total THM.

**Other Alternatives**

The aquifer banking system is the only backup source of water for HDPP and the interruption of the ABS operation has the potential of rendering the project inoperable at a time when California needs a reliable source of electricity. To minimize the possibility of leaving the project without a reliable backup source of water, HDPP, in coordination with the CEC and other regulatory agencies, is evaluating several alternatives to expedite banking. Below is a brief description of each alternative, estimate of additional years required to meet the water injection requirements and basis for the estimates. NOTE: The information in the following Table is not the basis for this petition. It is included here to show how banking can be expedited.

<b>Other Alternatives</b>	<b>Basis for Additional Year Calculations</b>	<b>Additional Years Required</b>
D) Reduction in water injection to 10,000 AF (based on use of reclaimed water) and CURRENT treatment levels	Injection Rate = 1,450 AF/yr 5 % water dissipation	7 years
E) Reduction in water injection to 7,000 AF (based on actual plant water use and use of	Injection Rate = 1,450 AF/yr	4 years

reclaimed water) and CURRENT treatment levels	5 % water dissipation	
F) Current water injection requirements (13,000 AF) and REVISED treatment levels for TDS and THM	Injection Rate = 2,210 AF/yr 5 % water dissipation	6 years
G) Reduction in water injection to 10,000 AF (based on use of reclaimed water) and REVISED treatment levels for TDS and THM	Injection Rate = 2,210 AF/yr 5 % water dissipation	4 years
H) Reduction in water injection to 7,000 AF (based on actual plant water use and use of reclaimed water) and REVISED treatment levels for TDS and THM	Injection Rate = 2,210 AF/yr 5 % water dissipation	3 years

**SPECIFIC REVISIONS TO SOIL & WATER - 4**

Proposed changes to the following Conditions of Certification are provided with new text shown underlined and deleted text is shown as ~~strikethrough~~. A discussion of the reasons for the requested changes is provided in the preceding section. Condition of Certification SW-4 is proposed for revision.

**Soil&Water-4. Injection Schedule:**

- d. The project owner shall inject one thousand (1000) acre-feet of SWP water within twelve (12) months of the commencement of the project's commercial operation.
- e. By the end of the ~~ffth~~ 12th year of commercial operation, the amount of water injected minus the amount of banked groundwater used for project operation, minus the amount of dissipated groundwater shall meet or exceed thirteen thousand (13,000) acre-feet.
- f. After the ~~ffth~~ 12th year of commercial operation and until three (3) years prior to project closure, the project owner shall replace banked groundwater used for project operation as soon as SWP water is available for sale by MWA. The project owner may choose to delay replacement of a limited quantity of banked groundwater used ~~fræ~~ for project operations during aqueduct outages until the cumulative amount of groundwater withdrawn from the bank reaches one thousand (1,000) acre-feet. Once the limit of one thousand (1,000) acre-feet has been reached, the project owner shall replace banked groundwater used for project operation during aqueduct outages as soon as SWP water is available for sale by MWA.

See the verification to Condition 5.

## **NECESSITY FOR REVISIONS TO SOIL & WATER - 4**

The current five-year injection schedule does not allow HDPP the flexibility to take the necessary actions to continue minimizing aquifer impact during periods of elevated TDS and total THM levels and meet the current ground water injection requirement (13,000 acfe-feet).

The current five-year injection schedule was specified during the plant certification process on the assumption that the average TDS concentration in the State Water Project (SWP) water received at the facility would be below 233 mg/L. The current treatment level of 248 was calculated by adding 15 mg/L from the chemical treatment process to the 233 mg/L in the incoming water. During the first two years of plant operation, the average incoming TDS concentration has been 257 mg/L. As a result, the ability to inject water has been greatly limited which has resulted in a significantly lower volume of water injected than originally estimated. In addition, due to an exceedance of the THM annual average treatment level in 2004, the operation of the aquifer banking system has been limited. THM levels for the past two years were between less than detectable (0.5 ug/L) and 2 ug/L.

An extension of the five-year injection requirement allows HDPP more flexibility to continue minimizing any potential aquifer impact and meet the current ground water injection requirement.

## **TIMING OF REQUEST FOR REVISIONS TO SOIL & WATER - 4**

This petition is submitted at this time based on new water quality information obtained during the first two years which is different than the information used in the original application for certification. The actual data compiled during the first two years of operation shows higher incoming TDS levels than estimated in the original application. In addition, a study performed after we received the Conditional Waiver indicated that the addition of 0.5 mg/l dose of chloramines to UF treated SWP water would result in a THM concentration of approximately 2 ug/L which exceeds the current THM annual average treatment level.

The change requested in this petition should be approved as it allows HDPP the flexibility to minimize any potential aquifer impact and realigns the permit conditions with the actual plant operating characteristics.

## **IMPACT ANALYSIS OF REVISIONS TO SOIL & WATER - 4**

The basic ideas of the project remain, specifically, SWP water will be injected into the aquifer via the ABS. The proposed revisions extend the timeframe or schedule to meet the current injection requirement of 13,000 acre-feet. Extending the injection timeframe will allow HDPP more flexibility to take the necessary actions to minimize injection and potential adverse impact to the aquifer during periods of elevated TDS and TTHM levels.

The change will not result in an adverse impact to the ground water quality and will be more protective of the aquifer by allowing HDPP more flexibility to take the necessary actions to minimize injection during periods of high levels of TDS and total THM.

The proposed changes do not adversely affect any of the findings of the Commission Decision.

Since the environmental impacts of the project remain insignificant, the proposed revisions should be permitted.

**COMPLIANCE WITH LAWS, ORDINANCES, REGULATIONS AND STANDARDS**

The initial HDPP AFC provided a comprehensive review of the requirements applicable to the facility and a demonstration of compliance. This petition does not change the compliance status with any of the LORS in the Commission Decision. With respect to the proposed administrative change to Conditions of Certification SW-4, the impact analysis discussed above does not change the compliance determination with the groundwater quality parameters.

**POTENTIAL EFFECTS ON PROPERTY OWNERS AND THE PUBLIC**

The proposed revisions to the CEC Condition in Soil & Water - 4 will not affect project equipment or the significance of environmental impacts. Therefore, the proposed revisions are not anticipated to affect nearby property owners, the public, or parties in the application proceedings. The list of property owners that surround the HDPP is provided in Table 1 below.

**Table 1  
List of Property Owners**

<b>NAME</b>	<b>ADDRESS</b>	<b>TYPE OF BUSINESS</b>
A-1 Recycling	18675 Perimeter Road Victorville, CA 92394	Aircraft Deconstruction
Apple Aero	18308 Readiness Street Victorville, CA 92394	General Aviation Aircraft Repair
Dynadrill, Inc.	13050 Aerospace Drive Victorville, CA 92394	Drilling
Flannery Company	13123 Aerospace Drive Victorville, CA 92394	Book Distributor
G.B. & L.	13117 Aerospace Drive Victorville, CA 92394	Trucking
General Electric	18000 Phantom Victorville, CA 92394	Aircraft Repair
K & S Metal Products & Repair	13600 Phantom Street Victorville, CA 92394	FAA Certified Repair/ Manufacturing Station

**Table 1  
List of Property Owners**

<b>NAME</b>	<b>ADDRESS</b>	<b>TYPE OF BUSINESS</b>
KLM Industries	13063 Mustang Road Victorville, CA 92394	Trucking Company
Kleinfelder, Inc.	18374 Phantom Road Victorville, CA 92394	Environmental Engineers
May Manufacturing	13198 Mustang Street Victorville, CA 92394	Spa Manufacturer
Mercy Air Services	18500 Readiness Street Victorville, CA 92394	Emergency Helicopter Service
Nestle Waters North American Inc.	13456 Fighting Falcon St. Victorville, CA 92394	Bottled Water Distributor
Pasha Group	13236 Mustang Victorville, CA 92394	Freight Forwarding
Southern California Aviation	18384 Readiness Street Victorville, CA 92394	Aircraft Maintenance, Storage & Sales
Stoody	18475 Finance Street Victorville, CA 92394	Welding Supply Wholesale House
Tess's Café (Westwinds Golf Course)	18003 Westwinds Road Victorville, CA 92394	Restaurant
Victorville Aerospace, LLC	13010 Aerospace Drive Victorville, CA 92394	Aircraft Maintenance
West Coast Aerospace	13059 Aerospace Drive Victorville, CA 92394	Thread Roll Die, Thread Manufacturer
Westwinds Golf Course	18003 Westwinds Road Victorville, CA 92394	Recreation / Golf
World of Leisure	13504 Phantom Street Victorville, CA 92394	Luxury Pool Table Manufacturer
World Service West	18590 Readiness Street Victorville, CA 92394	FBO & Security Services
Federal Prison Employment Federal Bureau of Prisons	13289 Air Expressway Victorville, CA 92394	Prison

### **SUMMARY OF REQUEST**

As demonstrated in this petition, the requested revision of Soil & Water Condition-4 will not result in an adverse impact to the groundwater quality and will be more protective of the aquifer by

allowing HDPP more flexibility to take the necessary actions to minimize injection during periods of high levels of TDS and total THM.

The revisions will not affect compliance with applicable LORS. Accordingly, HDPP requests that the Energy Commission Staff expedite review of this petition, and request Commission approval of the proposed modified conditions in accordance with Title 20 CCR §1769 (a)(3).